Correspondence

The Editors will be pleased to receive and consider for publication correspondence containing information of interest to physicians or commenting on issues of the day. Letters ordinarily should not exceed 600 words and must be typewritten, double-spaced, and submitted in duplicate (the original typescript and one copy). Authors will be given the opportunity to review the editing of their correspondence before publication.

A Safer Blood Supply

To THE EDITOR: The editorial by Dr Paul Bunn in the May issue calls attention to the desirability of testing the blood supply for the presence of HTLV-I infection.[1]

Your readers would probably appreciate knowing that HTLV-I testing has been part of the routine for insuring the safety of the blood supply for the past several months for all blood issued in the United States.

EMMETT B. REILLY, MD
Chair
Committee on Blood Banks
Los Angeles County Medical Association
Daniel Freeman Memorial Hospital
333 N Prairie Ave
Inglewood, CA 90301

REFERENCE

1. Bunn PA Jr: HTLV-I-associated diseases (Editorial). West J Med 1989; 150:578-579

The Increased Rate of Fractures of the Hip and Spine in Alzheimer's Patients

To THE EDITOR: It was suspected that patients with Alzheimer's disease would experience an increased rate of fractures of the hip and spine.

Method

A computer printout of women patients over the age of 60 with either a primary or secondary diagnosis of Alzheimer's disease was obtained. The medical records of these patients were then reviewed. There were 20 patients in this study with Alzheimer's disease. For a control, the records of 60 patients who were matched for age, race, and sex were similarly reviewed.

Results

In the 20 patients with Alzheimer's disease, 10 (50%) were found who had fractures of either the hip or spine. Of the 60 persons in the control group, 12 (20%) had fractures. A *P* value was obtained of less than .001.

Discussion

It appears that there is a significant correlation between Alzheimer's disease and fractures of the hip and spine as compared with controls. This correlates with results of a 1986 study by Buchner and Larson.[1] Patients with Alzheimer's disease need to be protected. The reason for this association may be more significant. This relationship can have only two logical explanations. Either Alzheimer's disease caused an increased rate of fractures, or osteoporosis, which predisposes to this type of fracture, and Alzheimer's disease have a common origin. In support of the former explanation, patients with Alzheimer's disease could have a poorer diet, less exercise, or otherwise have increased rates of osteoporosis.[2,3] They may simply fall more frequently. If Alzheimer's disease increased the frequency of fractures or the rate of the development of osteoporosis, these patients must sustain the fractures at a younger age than the control group with the same fractures. To determine if this was in fact the case, we compared the average ages of the Alzheimer's group who had fractures of the hip and spine with the control group, who had similar fractures. The average ages were 77.6 and 77.1, respectively. There was no significant difference. Alzheimer's disease does not appear to have increased the fracture rate or accelerated the development of osteoporosis. These observations are not inconsistent with the hypothesis that Alzheimer's disease and osteoporosis are derived from a mutual agent.

If this conclusion is correct, it follows that the therapy for osteoporosis should be efficacious in treating Alzheimer's disease.[4] Aside from the theoretical explanation of the etiology, treating Alzheimer's patients for osteoporosis can be justified on the basis of the association with fractures.

LESTER B. WEISENBERG, MD
5757 W Thunderbird Rd, Suite E459
Glendale, AZ 85306
JOHN GAINES, PhD
University of Arizona
College of Medicine
Tucson, AZ 85724

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2. Parfitt AM: Dietary risk factors for age-related bone loss and fractures. Lancet 1983; 2:1181-1185

3. Seeman E, Riggs BL: Dietary prevention of bone loss in the elderly. Geriatrics 1981; 36:71-79

4. Riggs LB, Seeman E, Hodgson SF, et al: Effect of the fluoride/calcium regimen on vertebral fracture occurrence in postmenopausal osteoporosis—Comparison with conventional therapy. N Engl J Med 1982; 306:446-450

Lyme Disease in Northern California

To THE EDITOR: A recent article in the journal indicated that the vector of Lyme disease inhabits the entire West Coast.[1] In northern California fear of Lyme disease is rampant because of an increased number of case reports and the drama of the news media. People visualize infected ticks perched on bushes and grass waiting to infect all passersby. As this disease becomes more widely recognized throughout the West, fear of Lyme disease will spread. This fear is quite false based on current data, medical literature, and expert opinion. As physicians we must educate our patients about this disease and quiet their fears.

The offending spirochete, *Borrelia burgdorferi,* is transmitted in the West by the deer tick, *Ixodes (Ixodes) pacificus.* It occurs year round, with a major peak in summer and a second lesser peak in winter. Lyme disease occurs in stages of active and silent disease. The illness usually begins with a skin rash, erythema chronicum migrans, and may be followed by cardiac, neurologic, or joint problems. Laboratory tests may be helpful but are not standardized or totally reli-

able for the diagnosis. Antibiotic treatment is beneficial, particularly in the early phases.

Fear of Lyme disease is unwarranted in northern California as well as the rest of the state because only 1% to 2% of the ticks are infected. This statewide percentage has been stable for the past five years. These figures come from the California State Department of Health and University of California experts using the most accurate, painstaking individual tick testing methods (Robert S. Lane, PhD, University of California, Berkeley, oral communication, July 1989).

This low infection rate is in contrast to that in the East where in some areas 30% to 80% of ticks are infected. In other areas, the infection rate has grown rapidly in recent years. The reason for this difference is that the life cycle of the eastern tick involves warm-blooded mice that carry the infection. Our western tick cycle involves cold-blooded lizards that do not contract or carry the organism. *I pacificus* inhabits the entire coast range and eastern Sierras. Because of this low infection rate experts do not recommend routine prophylactic treatment of tick bites in the West.

Some simple tips can lessen our patients' risk of this disease:

- Avoid tick bites. When in areas where there may be ticks, tuck in shirt at the waist, and tuck trousers into socks. Light clothing can show ticks, and a repellent using diethyltoluamide (deet) on clothing may be helpful.
- Remove ticks promptly. Check all family members promptly and thoroughly, including the hairline, underarms, navel, groin, and behind the ears. Ticks like shade and humidity, and they frequently scout around for many hours. Prompt removal can lower risk because it generally takes at least 24 hours of feeding to transmit the organism. An experimental study of infected eastern ticks on rodents found only 7% infected after 24 hours of feeding, 37% infected at 48 hours, and 93% at 72 hours.[2] Similar studies will soon be underway on the Western tick vector. Results may differ, however, because only 5% of infected Eastern ticks carry the spirochete systemically outside their midgut, while 30% to 40% of infected Western ticks are systemically infected. This may explain Lyme disease occurring from briefer tick feeding in California.
- Remove ticks properly. Heated matches, vaseline, nail polish, alcohol, and the like should not be used. In fact they may increase risk by stimulating the tick to regurgitate infected stomach contents. The best method is to use tweezers or covered fingers. Grasp the tick as close to the skin as possible and not by the body. Pull straight out—without twisting—at 90° with steady traction. If the "pincers" break off there is no great risk of infection because the Lyme spirochete is in the tick's stomach, which has been removed. Theoretically, the spirochete can go through the skin, so do not squash the tick. Wash fingers afterwards. Always use tweezers when removing large numbers of ticks from a dog. (Animals also can contract Lyme disease.)
- Save the tick. Check with a physician for possible identification.
- Watch for the erythema migrans rash. This early stage of Lyme disease can occur with no remembered tick bite. Particularly in spring and summer, tiny speck-like nymphal ticks occur. They may feed and drop off without a trace. Any red, circular, or oval enlarging rash with or without a central bull's-eye clearing should be reported promptly to a physician. Furthermore, a flu-like illness within a few weeks of a tick bite even without a rash warrants a physician's attention. Lyme disease may occur without the rash. Early antibiotic treatment is the best insurance to prevent late complications of Lyme disease.

The Northern California Lyme Disease Study is a surveillance study as well as a physician and patient education study of Lyme disease. We make available a patient education handout that includes tips on preventing tick bites and properly removing ticks. This handout can be reproduced and given to our many anxious patients. We also have pictures of erythema chronicum migrans. We would be happy to send these to all who are interested upon receipt of a self-addressed, stamped envelope.

Widespread preventive education can turn the tide and diminish Lyme disease in the near future. In the meantime, with simple precautions our patients can enjoy an outdoor summer without fear of Lyme disease.

ROBERT J. WERRA, MD
Coordinator, Northern California Lyme Disease Study
721 S Dora St
Ukiah, CA 95482

REFERENCES

1. Damrow T, Freedman H, Lane RS, et al: Is *Ixodes (Ixodiopsis) angustus* a vector of Lyme disease in Washington State? West J Med 1989; 150:580-582

2. Piesman J, Mather TN, Sinsky RJ, et al: Duration of tick attachment and *Borrelia burgdorferi* transmission. J Clin Microbiol 1987; 25:557-558

Managing Hypercholesterolemia

To the Editor: Robert Baron should be commended for a well-written, thorough, and up-to-date article on the management of hypercholesterolemia.[1] Unfortunately, his review is far from complete as a "primary care perspective" and fails to address issues of importance to the true day-to-day care of patients.

Most important, Dr Baron does not comment on the issue of age. Should a 78-year-old woman obtain a cholesterol level every five years? Should such a patient be treated for a level of 240 or greater? Should she drastically alter a diet of many years?

Other questions are ignored as well. At what age should cholesterol levels first be drawn? Is there a problem extrapolating data drawn exclusively from men (ages 30 to 65) to a recommendation for women?

The unfortunate reality in primary care is that many of our patients who are most concerned about the cholesterol issue are over 70 years of age. Until more is known about this age group, it is hardly warranted to conclude a cholesterol review with the lead-in: "All adult patients should. . . ."

MICHAEL P. MADWED, MD
320 NW 113th Place
Seattle, WA 98177

REFERENCE

1. Baron RB: Management of hypercholesterolemia—A primary care perspective (Medical Staff Conference). West J Med 1989; 150:562-568

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To the Editor: We applaud Dr Robert B. Baron for his excellent discussion of the management of hypercholesterolemia.[1] His article is succinct, comprehensive, and of obvious value to primary care physicians.

We would like to supplement his comments in regard to the role of physicians in assisting patients to change their